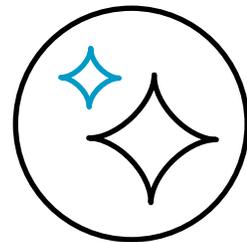




Cleaning in Education

How to create an A+ Cleaning Program



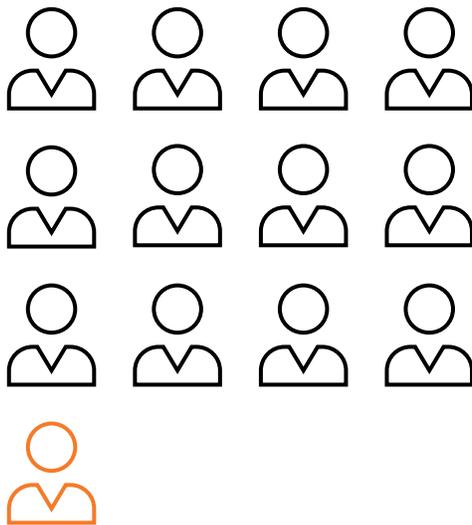


Why Healthy Schools are Important

If you're concerned about the safety of the products you use in your home, a recent survey by Ipsos and NSF proves that you're not alone. 41% of respondents are very concerned about how safe their cleaning supplies were. The number jumps to 79% when the survey respondent was a parent.¹ Americans, including parents of students, staff, and other stakeholders, are more aware and are becoming very concerned about cleaning chemicals. It's time that sense of urgency regarding environmental health and safety be pushed to the forefront at schools, with deeper consideration and discussion regarding how we can make them a better workplace just as we work to make it a safer space for learning and growing students.

It's not just that school stakeholders becoming more aware and concerned. There are numerous studies by the EPA and its Science Advisory Board (SAB), linking poor indoor air quality, which includes effects of airborne pollutants such as cleaning chemicals, to side effects such as coughing and wheezing, shortness of breath, sore throat, red (and itchy) eyes, headaches, nosebleeds, skin rashes, or even asthma. According to the EPA, 1 in 13 children of school-age has asthma, which is the leading cause of school absenteeism due to chronic illness.²

It's time that sense of urgency regarding environmental health and safety be pushed to the forefront at schools



1 in 13

children of school-age has asthma, which is the leading cause of school absenteeism due to chronic illness.²



A custodial worker uses 194 pounds of chemicals each year, 25% of which are hazardous substances, which can exacerbate asthma symptoms. Additionally, custodial staff experience one of the highest rates of occupational asthma. Custodians also suffer the highest exposures to chemical products used in floor care, glass cleaning, disinfection, and indoor and outdoor pest control.³ Purchasing and using only the least-toxic products for these tasks would help protect not just custodians but every member of the school community.

For these reasons, it's important to understand the ingredients that are in the products used in your school.



A custodial worker uses 194 pounds of chemicals each year,

25% of which are hazardous substances³

Custodians also suffer the highest exposures to chemical products used in floor care, glass cleaning, disinfection, and indoor and outdoor pest control.³



How to Clean for Healthier Schools

Because of the harsh chemicals that can be present in cleaning supplies, and the nature of a custodian's work, it's important to help protect your custodial staff from potential negative health impacts. As an employer, you're required to provide appropriate ventilation around cleaning materials, but also to provide protective clothing. Another important requirement is that the cleaning chemicals must all have labels on them so your staff understands what they're exposed to on a regular basis.

Employers are also required to train staff about the hazards, as well as use and storage, of cleaning supplies prior to first use. They should also learn how to safely dilute the cleaning chemicals, and how to proceed if there is a chemical spill. Perhaps most important of all, they must be trained to use protective gear (goggles, gloves, and clothing) when using cleaning chemicals.

While there are potential dangers to using harsh cleaning chemicals, the good news is that there are alternatives to some of the more dangerous products. They're often called "green cleaners" and are certified by independent organizations as less harmful to the environment and safer to use. You may still be required to use protective clothing when you use them because even with regular use, they can be just as powerful and effective as the more dangerous cleaning chemicals without the same level of side effects or symptoms upon use. Green cleaners are also sometimes developed as fragrance-free solutions since scent really does nothing for the efficacy of its cleaning power and some users experience fragrance sensitivities.

**It's a myth that for something to be clean, it has to have a scent.
In reality, clean doesn't have an odor!**

Source: healthyschools.org



Disinfection Tips for Your School

The importance of maintaining a clean, healthy environment to protect students and educational professions is in the spotlight. The best practices for doing this are well established. Cleaning is the fundamental first step in this process. It cannot be skipped and it must be well-executed to get the results you want. You may not need to disinfect every surface, and slathering disinfectants everywhere just in case only serves to unnecessarily expose students and staff to potentially harmful chemicals every day. It's important to implement and follow situational policies and procedures for how and where sanitation and disinfection will be implemented in the school environment. Be sure to select an EPA-approved disinfectant and ensure the chemical you choose is approved for your particular application. The EPA maintains a list of **registered disinfectants** that meet its criteria and can be used to control the virus that causes COVID-19.⁴

While every space in a school environment may have special considerations based on the use case and possible contamination factors, common practice is that cleaning is needed in every nook and cranny of the school and frequently surfaces should be routinely cleaned and disinfected according to CDC recommendations. Reduce the spread of germs by keeping surfaces clean and reminding students of the importance of hand hygiene.^{6,7}

AREA	DISINFECTION BEST PRACTICES
Cafeteria or Food-Related Spaces	Surfaces must be cleaned and then treated with food-contact sanitizer. You're trying to kill E. coli or other pathogens.
Nurse's Office	Counters and bed should be cleaned and disinfected with hospital-grade solutions, and appropriate care should also be taken with fluids, etc.
Bathrooms	Disinfectants are used after cleaning, with special emphasis on "touchpoints" (faucet handles, doorknobs, and sinks). You are trying to kill viruses and fungi.
Classroom Desks	Follow CDC recommendations to properly clean and disinfect surfaces and objects in the classroom that can help safely and effectively reduce the spread of disease in your school or facility. Be sure to use EPA approved disinfectants and avoid cleaning and disinfecting around students. ⁵
Hallways and Other Public Surfaces	General purpose cleaning supplies should be used in hallways, carpets, floors, mirrors, and windows. Generally speaking, floors are deemed non-critical surfaces for most environments and disinfecting them has a limited effect.

Source: Greenschools.net and CDC

Cleaning and disinfecting are key to limiting exposure to germs and maintaining a safe environment⁶



The Importance of Hand Washing

Cleaners and disinfectants are important, but much of the health and safety considerations in our schools can come down to just using soap and water to wash your hands. That's why so much focus is placed on teaching students to properly clean their hands. It's a powerful tool for helping to protect the entire school population from the spread of disease.

You've probably seen variations of the proper hand washing procedure in school or other public restrooms. Yet, we continue to discuss and rehash the benefits and best practices of washing our hands. It's such an easy procedure, and studies have shown that it can reduce exposure to viruses as well as other diseases or conditions. So, we'll keep talking about it, and (hopefully), continuing the discussion will inspire more hand washing.

As an alternative to handwashing, when soap and water are not convenient or easily accessible, you can use hand sanitizer. It's not the best choice or the best way to prevent disease, but it is better than nothing. It's important to understand, though, that not all hand sanitizer solutions are created equal. You should look for hand sanitizers that have a 60% to 95% alcohol concentration. Studies have shown that non-alcohol hand sanitizers don't work as well, that the solutions can irritate your skin, and that germs become resistant to those solutions.⁸



Look for hand sanitizers that have

60-95%

alcohol concentrations



Cleaning Equipment for Healthy Schools

It's imperative to understand the importance of the cleaning equipment you use since the chemicals used with floor cleaning machines are part of the environmental health discussion. You can, and likely will, experience substantial environmental health benefits by incorporating vacuums or floor sweepers with high efficiency particulate air (HEPA) filters to achieve better overall air quality. The age of the school and the infrastructure is not something you can typically control, but you can still focus on improving the air quality. Better air quality has been proven to positively affect the health, safety, and efficiency of school buildings because, as discussed previously, the quality of the air has been linked to everything from sore throats, respiratory issues, asthma attacks, and even headaches and drowsiness.

Beyond the simplicity of focusing on the air we breathe; you'll want to consider the environmental impact of the products and services you use in your school. The products and equipment you use can have a correlation with waste management, energy conservation, and also the toxification of our environment. The solution is often easy and may even be cost-effective.

Additionally, many floor cleaning machines, like floor scrubbers, offer detergent-free cleaning solutions to further reduce the chemicals used on your school's floors. By cleaning with just water, you not only save money on cleaning chemicals, but also reduce the environmental impact of cleaning.

Better air quality has been proven to positively affect the health, safety, and efficiency of school buildings⁹



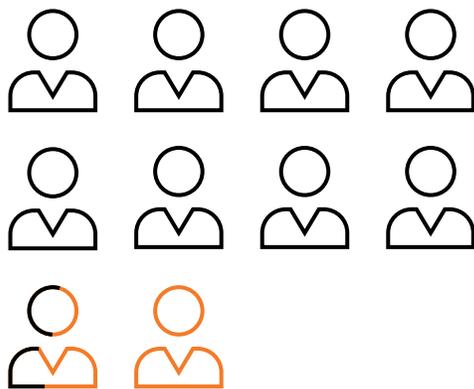
Choosing Cleaning Products for Healthy Schools

The question sounds easy: How do you select the cleaning products that will support a healthy and safe school environment? You need to remove dirt, dust and other debris that adversely affect the overall cleanliness and health of the school, and cleaning products are a necessary component for maintaining your school's appearance.

As you dig deeper, though, you discover that cleaning is also about preventing illness, so the function of cleaning evolves, which often means using more powerful cleaning supplies. In the effort to clean and protect the school environment, though, students, and staff are also exposed to toxins that can cause health and environmental concerns. Fortunately, there are cleaning solutions that are specifically formulated to offer healthier and more environmentally safe cleaning.

Here are a few factors to consider when you select products to use, according to the EPA:

- What is the impact on the environment? Green cleaners help to improve air quality, while also helping to reduce air and water pollution.
- What about waste management? When you buy green cleaners in bulk you're also reducing waste. There's less packaging and you can often get them in a concentrated form to allow for dilution.
- Are they certified? Not all green products are the same, but if the product is certified, you know that an independent organization verified that it is less harmful to the environment and safer for you to use. Some 83% of respondents surveyed said they'd trust a "certified" product compared to a non-certified one.¹⁰



83%

of respondents surveyed said they'd trust a "certified" product compared to a non-certified one.¹⁰



When researching and purchasing cleaning products, purchasers should be sure to do their due diligence in interpreting claims from cleaning solution companies to ensure their products really are safer than their conventional counterparts. While this may add time to the purchasing process when choosing new suppliers, not doing the proper research may cause you to purchase products that aren't really as healthy as advertised.

What to look for in safer cleaning products:

With all of the information available, it can be confusing and time consuming to change cleaning supplies. Here are some things to look for when researching safer cleaning products:¹¹

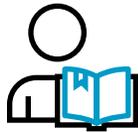
- Minimal presence of corrosive or strongly irritating substances such as known carcinogens or reproductive toxicants, ozone depleting compounds or regulated hazardous materials
- Use of renewable resources, such as solvents from citrus, seed, vegetable and pine oils
- Low volatile organic compound (VOC) content
- Low flammability (flash point of > 200)
- Environmentally friendly packaging and shipping processes, such as refillable bottles, bulk shipping options, pump sprays versus aerosols, etc.

Use cleaning products with renewable resources, such as solvents from citrus, seed, vegetable and pine oils¹¹



Implementing a Healthy Schools Cleaning Program

The process and strategy for implementing a healthy school cleaning program will be different depending on your role. Here are three role-based categories to consider:



Classroom Staff

Teachers and other classroom staff have limited time during the day, and a lot of those moments are spent on prep work, but there are ways that teachers and classroom staff can help to implement a healthy school cleaning program.



Custodial Staff

Custodial staff are typically on the front lines, which means they have a high stake in implementing a healthier cleaning program and should be involved in decision making.



Principals

As the leader of the school, principals potentially have the biggest impact for implementing a healthy school cleaning program.



What Can Classroom Staff Do?

- Leave the classroom ready to clean.
- Remove the debris from the floor.
- Turn over chairs onto the desks.
- Keep counters, desks, and other classroom spaces free of clutter and debris.
- Clean up spills right away. Clean and disinfect frequently touched surfaces and objects.⁶ Use microfiber cloths for cleaning.
- Participate in discussions about how to improve health and safety strategies.

It may sound overly simplistic, but a few key strategies to ready the classroom for cleaning can allow the custodial staff to spend less time on incidental cleaning requirements. A clean classroom and cleared workspaces can also contribute to better learning retention, productivity, and growth as a student while helping to alleviate some of the most basic frustrations of classroom staff.

What Can Custodial Staff Do?

In addition to experiencing the highest rates of occupational asthma, custodians can suffer serious chemical burns to the skin or eyes, and they inhale chemical vapors, which can also cause injury. Here are a few ways that custodial staff can help with the implementation of a healthy school cleaning program:

- Make sure they've been properly trained in the use of all cleaning supplies.
- Request less toxic, 3rd-party certified cleaning supplies and tools.
- Prioritize custodial duties to those areas most frequented.
- Immediately address spills.
- Judiciously target disinfectant use.
- Always use appropriate health and safety precautions.
- Participate in discussions about how to improve health and safety strategies.
- Learn about safer chemical choices through the EPA's Safer Chemical List.¹¹

An effective and safe school cleaning program will affect the health of custodial staff more than any other group of people in a school. Custodians should not have to worry about injuries or health conditions in their work environment. It's time for health and safety to really become the major focus.

What Can Principals Do?

Principals potentially have the biggest impact for implementing a healthy school cleaning program. Here are just a few of the most helpful strategies:

- Approve the purchase of less toxic, 3rd-party certified cleaning supplies and tools.
- Educate teachers, students, and parents about green cleaning.
- Train staff to use green products and more environmentally safe procedures.
- Encourage and/or mandate wide-spread participation to improve health and safety strategies.

Health and safety procedures are in place, but it's a matter of molding those policies toward a more green and healthy focus. Principals can tap into state or local district policy and can also work with the Health & Safety Committee to achieve the desired goals.



It's time to clean for health

Conclusion

You know that cleaning products can be hazardous and that indoor air quality is of utmost importance. Members of the school's population could experience unfortunate side effects from your school's current practices if you are not employing a cleaning program that supports the health and well-being of your staff and students in the best way possible. As you move forward toward the implementation of a healthy school cleaning program, try to:

- Use less toxic cleaning supplies.
- Use tools and equipment that are proven to improve air quality and promote the health of those spending time in your school.
- Train all employees, not just custodians, on appropriate strategies for disinfecting.

Get Help Keeping Your School Safe and Healthy

As a recognized industry leader, Tennant Company has made it our mission to change the way the world cleans. With products and solutions designed to help create a cleaner, safer, healthier world, we can help you build a cleaning program that keeps students and staff safe.

Contact us to find a healthy school solution

800.964.9644 [tennantco.com](https://www.tennantco.com)



Notes

¹ NSF International. (May 16, 2019). When thinking about cleaning products, how concerned are you about the following factors? [Graph]. In Statista. Retrieved September 24, 2019, from <https://www.statista.com/statistics/1035374/consumers-health-and-safety-concerns-of-cleaning-products-us/>

² <https://www.epa.gov/iaq-schools/why-indoor-air-quality-important-schools>

³ https://drive.google.com/file/d/0B-jj-Uqv_J65MVIFdEVUZ2VjX2s/edit via <http://www.healthyschools.org/>

⁴ <https://www.epa.gov/pesticide-registration/list-n-disinfectants-coronavirus-covid-19>

⁵ <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/clean-disinfect-hygiene.html>

⁶ <https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/cleaning-disinfecting-school-classrooms.pdf>

⁷ <https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/Six-Steps-for-Cleaning-Disinfecting-school.pdf>

⁸ <https://www.cdc.gov/handwashing/show-me-the-science-hand-sanitizer.html>

⁹ <https://www.epa.gov/iaq-schools/indoor-air-quality-tools-schools-preventive-maintenance-guidance-documents#proposition>

¹⁰ NSF International. (May 16, 2019). When thinking about cleaning products, how concerned are you about the following factors? [Graph]. In Statista. Retrieved September 24, 2019, from <https://www.statista.com/statistics/1035374/consumers-health-and-safety-concerns-of-cleaning-products-us/>

¹¹ <https://www.epa.gov/greenerproducts/greening-your-purchase-cleaning-products-guide-federal-purchasers>